

I CLAIM:

1. An electronic system comprising:

configurable electronic circuitry means for replicating an output signal from a respective known electronic system sub-component of a known electronic master system, the output signal corresponding to a function of the electronic system sub-component;

an input/output interface for electronically mating the configurable electronic circuit to the electronic master system; and

a configuration controller element electronically connectable with the configurable electronic circuit, the configuration controller configures the configurable electronic circuit to replicate a selected function and operational characteristics of the known electronic system sub-component;

wherein the configurable electronic circuit has an output adaptable as an input to the electronic master system to replicate and replace functions of the known electronic system sub-component acting in the electronic master system.

- 15 2. The invention of claim 1 wherein:

the configurable electronic circuit and the input/output interface are mounted with a circuit card assembly.

3. The invention of claim 1 wherein:

the configuration controller determines location of the configurable electronic circuit within the electronic master system.

4. The invention of claim 1 further including a processor means external to the configurable electronic circuit to load instructions onto the configurable electronic circuit.

5. The invention of claim 1 wherein the configurable electronic circuit further includes memory means for storing electronic information.

6. The invention of claim 1 wherein the configurable electronic circuit includes digital logic circuitry.

7. The invention of claim 1 further including a microprocessor means for executing an emulator program of instructions from the known electronic system sub-component.

8. A method of configuring an electronic circuit module to replicate output signals from a known electronic circuit comprising:

determining operational functions and respective output signals of a known electronic system sub-component of an existing electronic master system;

developing a program on an external processor to replicate desired functions of the known electronic system sub-component; and

loading the program onto a configurable electronic circuit that can be electronically connected to the electronic master system;

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10 whereby the configurable electronic circuit has an output adaptable as an input to the electronic master system to replicate and replace functions of the known electronic system sub-component acting in the electronic master system.

9. The invention of claim 8 wherein the configurable electronic circuit is included with a circuit board that can be electronically connected to the electronic master system.

10. The invention of claim 9 wherein the circuit board is removable from the electronic master system.